Subject: CONSTRUCTION MEMORANDUM NO. 01-77 Winter Shutdown

Procedures Effective: November 15, 2001

Expires: Indefinite

When the Contractor plans for a lengthy suspension of a project during the winter months, certain procedures should be employed in order to provide a safe roadway for motorists and accommodate State maintenance operations during this period.

#### Field Review

Prior to a winter shutdown, a comprehensive field review should be conducted by project personnel that includes the Resident Engineer, Supervising Field Engineer and the Contractor's Superintendent along with the Maintenance Field Engineer. On some projects, it may be desirable to have the District Landscape Architect and/or Traffic Operations Engineer present for this review. This review is intended to identify problem areas that exist, or areas which may become problems over the shutdown period, and to clarify areas of responsibility for maintenance of the roadway during the winter shutdown period. The review should be documented with copies distributed to all participants for better coordination. As a minimum, the review should include the following topics.

#### **Pavement Surfaces**

- Do not leave a centerline drop-off over the winter. The drop-off makes it difficult to
  plow snow and can cause drainage problems. When performing late season paving,
  the Resident Engineer should ensure that the contractor schedules his/her resurfacing operations so that lengthy centerline drop-offs are avoided.
- 2. Do not leave extensive lengths of cold milled surfaces open to traffic over the winter.
- 3. If butt joints have to be left over the winter, extend the approach taper to a minimum length of 20 ft. per inch of thickness.
- 4. Do not leave steel plates on the roadway over the winter.
- 5. Review pavement patches to see if they are relatively flush with the adjacent pavement. If necessary, mill off or fill. If deteriorated areas of the pavement can't be permanently patched, remove loose material and fill with a bituminous sand mix and compact by mechanical means or wheel rolling.
- Check to see that manhole, water valve and gas valve covers are flush with the adjacent pavement. All of these are potential hazards to snowplows. Provide adequate tapers around exposed castings.

# **Shoulders**

- 1. Check for high shoulder areas that could pond water on the traffic lanes. High areas should be removed by milling or other approved methods in order to ensure pavement drainage.
- 2. Eliminate pavement/shoulder drop-offs by blading material up to the edge of pavement or edge of shoulder, as appropriate, and compacting to the satisfaction of the Engineer.
- 3. Remove all construction debris, such as broken concrete, bituminous material, piles of sand, etc., from within the clear zone. (For a complete definition of clear zones, see Figure 55-4B on page 55-4(6) in the Bureau of Design and Environment Manual.) If not available, consult with the design section of the district.
- 4. Absolutely no equipment should be left within the clear zone over the winter. This includes idle traffic control devices such as message boards, arrow boards and construction speed limit sign trailers. Also ensure that any equipment stored behind concrete barriers are far enough away as to not become a hazard when the barrier shifts if hit. See Article 701.04(b)(3).
- 5. All materials should be removed from the shoulder and out of the clear zone before the winter shutdown. As an example, do not allow the contractor to store precast concrete manholes or castings next to the edge of pavement.

# **Erosion Control**

- 1. Install all temporary erosion control features and any permanent features that can be incorporated before the winter shutdown.
- 2. Contact your landscape architect for specific procedures.
- 3. Follow Construction Memorandum No. 60 and the construction inspector's checklist for erosion control.

### **Drainage**

- 1. Check to see that ditches are not impaired and that culverts are clean.
- 2. Install sediment basins at the downstream end of culverts. This helps keep silt from accumulating in the pipe. Install filter fence and/or appropriate ditch checks at the upstream end of culverts to keep them clean.
- 3. Closed drainage systems should be secured to prevent access by children.
- 4. On multilane urban sections, the outside travel lane must be left at the same elevation or lower than the inside lane(s) to ensure that water is not trapped between lanes. When placing surface course, try to work from the median lane to the outside lane unless it is certain that all the surface course can be completed before the winter shutdown.
- 5. For pavement sections with curb and gutter, if the bituminous surface cannot be placed before the winter shutdown, drainage must be provided at inlets. Small diameter PVC pipe can be installed under the inlet casting to the edge of the flag to

provide temporary drainage. These pipes must be installed when the inlets and the curb and gutter are constructed.

# **Signs and Pavement Markings**

- All regulatory signs (Stop, Yield, No Passing, Speed Limit, etc.) should be installed at the proper locations and heights before suspending the project for the winter. Maintenance of these signs is the responsibility of the contractor. The locations for these signs are usually inventoried by mile stations and available from the Bureau of Operations. See Article 107.25.
- 2. Work zone signing should be reviewed. All temporary sign supports should be removed. Signs that do not apply to current conditions should be removed or completely covered. Examples of acceptable sign face coverings are as follows:
  - Plywood
  - Thick gauge opaque plastic material of a dark color. (plastic garbage bags are not acceptable)
  - Dark canvas material
  - Another sign, the exact same size with the backside facing toward traffic.

Road Construction Ahead Signs should be removed and/or covered if no unusual conditions will exist over the winter or if the project is physically complete. They should not be used to identify the limits of a project that will resume at some future date. However, they should be displayed if any one of the following conditions occur over the winter.

- Active construction
- Detours
- The presence of drop-offs
- Inadequate striping
- Inactive stage construction
- Crossovers
- Other conditions at RE's discretion (Examples: Special conditions, emergency work, construction maintenance type work)
- 3. Schedule the placement of pavement markings as early as possible to avoid poor weather conditions, specification cutoff dates, and scheduling problems that can and do occur late in the year. If the cutoff date for thermoplastic or epoxy marking cannot be met (due to paving operations for example), place temporary striping for the winter and then place the permanent markings in the spring or summer as the specification allows. Maintenance of pavement markings is the responsibility of the contractor.

# **Traffic Control Surveillance**

The contractor is responsible for maintaining traffic control devices over the winter. For a project that will be inactive over the winter, hazards that would normally require Traffic Control Surveillance should be eliminated (fill open trenches for example) and, thus, Traffic Control Surveillance by the contractor should not be required. However, if conditions exist as described in Article 701.04(b)(2) on an inactive construction project over the winter, then Traffic Control Surveillance should be performed by the Contractor as directed by the Engineer.

### **Miscellaneous Considerations**

- Review the condition of all entrances, side roads and mailbox turnouts before the winter shutdown. If they are not in an acceptable condition, place enough temporary aggregate or bituminous material to keep them passable for the winter period. Maintenance is the responsibility of the contractor.
- 2. For detour roads and bridges, review surface conditions and repair any problem areas.
- 3. For stage construction projects that must be maintained over the winter, check all traffic control items such as signals, arrow-boards, signs, barricades, barrier walls, etc. to see that they are properly placed and in good working order throughout the winter. Leave as much width as possible for the open traffic lane over the winter.
- 4. Road Closures. If at all possible, do not close a road for an extended period of time during the winter period (approximately November 15 to April 15). Snow removal becomes difficult if the roadways are inaccessible.
- 5. Review any special items that are unique to your project for possible problems over the winter. Make corrections before the winter shutdown.
- 6. If the contract calls for removal and re-erection of existing guardrail, do not remove the old guardrail if the new guardrail cannot be installed before the winter shutdown. If this is impractical, provide a temporary barrier over the winter such as an array of impact attenuators. See Article 701.05(f)

The cost of all materials, equipment, and labor necessary to comply with the provisions of this memorandum should normally be included with the various pay items in the contract. See Articles 107.09, 107.14, 107.25, 107.29, 107.30, 108.07, 701.05(f), and 701.08. For items not covered by the contract, payment will be made in accordance with Article 109.04 as directed by the Engineer.

Gary Gould

**Engineer of Construction** 

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